

Re: High strength fibers for high pressure tubes.

## Re: High strength fibers for high pressure tubes.

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*Source:* <http://sci.tech-archive.net/Archive/sci.physics/2005-04/msg03988.html>

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- *From:* bz <bz+sp@xxxxxxxxxxxxxxxxxxxxxx>
  - *Date:* Wed, 27 Apr 2005 23:21:32 +0000 (UTC)
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Mitchell Jones <mjones@xxxxxxxxxxxxxxxx> wrote in  
[news:mjones-DC382D.16560327042005@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:mjones-DC382D.16560327042005@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx):

> In article <Xns9645209236EF1WQAHBGMXSZHVspamnote@xxxxxxxxxxxxxxxx>,  
> bz <bz+sp@xxxxxxxxxxxxxxxxxxxxxx> wrote:  
>  
>> Mitchell Jones <mjones@xxxxxxxxxxxxxxxx> wrote in  
>> [news:mjones-62105F.01420327042005@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:mjones-62105F.01420327042005@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx):  
>>  
>>> In article <Xns9644D4EEDCBWQAHBGMXSZHVspamnote@xxxxxxxxxxxxxxxx>,  
>>> bz <bz+sp@xxxxxxxxxxxxxxxxxxxxxx> wrote:  
>>>  
>>>> Mitchell Jones <mjones@xxxxxxxxxxxxxxxx> wrote in [news:mjones-740551.20301826042005@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:mjones-740551.20301826042005@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx):  
>>>>  
>>>> ....

.....  
> \*\*\*{We will always and inescapably remain, whatever our level of  
> technology, finite beings who must choose some things and set aside  
> others. We can do and have more and more, as technology advances, but we  
> will never reach a point where we can do everthing we want to do and  
> have everything we want to have. Our desires will always exceed our  
> capabilities. It's simply the way life is. ---MJ}\*\*\*

Mankind displays (collectively) the mentality of a two year old child  
(perhaps I overestimate).

Perhaps someday (if we survive long enough) we will grow up and become an  
adult species.

.....  
>> Who said anything about FORCING anyone?  
>  
> \*\*\*{You didn't say that, of course. But there is obviously no way to  
> turn Earth into a park unless the people leave, and the vast majority  
> aren't going to leave unless they are forced to do so. You and I might  
> move into space at the first opportunity, but most people won't.  
> ---MJ}\*\*\*  
>

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>> If I had a nice place to live in L3 or L5, I would enjoy restoring my  
>> current properties in La and Wy to pristine condition. It would be a  
>> good hobby. I could watch my box turtles roam my property without my  
>> house in their way.  
>  
> \*\*\*{Maybe so, but if you were on L3, your neighbors would probably have  
> turtle soup. :-) ---MJ}\*\*\*

Not a good idea.

<http://www.geocities.com/abeisaw/SAA2001.html>

[quote]

These turtles slow metabolic rate and omnivorous diet can render their flesh poisonous to humans. Accounts specific to the dangers of eating box turtles include a report that Pennsylvania miners ate box turtles (during a strike) and became ill. This account explains that the turtles may had fed on a poisonous fungus, which did not affect them but made their flesh temporarily poisonous (Ernst 1972). Another account tells of box turtles that were accidentally roasted in burning brushpiles in Mississippi and were eaten by several boys, all of whom subsequently became ill (Carr 1952).

[unquote]

.....

>> All the carbon is not in useable form. In fact, most of it is not.  
>> Calcium carbonate does not burn very well. There are many other  
>> carbonate from which we can not extract energy.  
>  
> \*\*\*{Free oxygen (O2) is a highly reactive substance, and, as such, was  
> not present in the primordial atmosphere of the Earth. Photosynthesis  
> stores solar energy in complex carbon compounds by removing oxygen and  
> releasing it into the atmosphere. The forms of carbon that remain can be  
> burned to extract energy.

Unfortunately they are not accessible for use as fuels.

[http://www.sciam.com/askexpert\\_question.cfm?articleID=000E9FDF-CBC1-1C71-9EB7809EC588F2D7](http://www.sciam.com/askexpert_question.cfm?articleID=000E9FDF-CBC1-1C71-9EB7809EC588F2D7)

[quote]

there is not nearly enough fossil fuel to account for the atmospheric oxygen inventory. But there is a lot more organic matter buried in the crust in the form of finely disseminated particles incorporated in shales and limestones.

[unquote]

> That's why we refer to them as fuels. When  
> they are burned, the oxygen that was originally released into the  
> atmosphere is removed. And if all of the carbon fuels on Earth produced  
> by photosynthesis were burned, \*all\* of the oxygen in the atmosphere  
> would be removed.

Actually if ALL the reduced carbon were burned, it would take more oxygen

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than is available.

[quote]

"Clearly, there is more organic matter in the crust than can be accounted for only by the amount of oxygen in the air and in these oxidized reservoirs. The additional organic matter must have come from anaerobic bacteria that converted carbon dioxide to organics via processes that do not create free oxygen. (These bacteria use reduced chemical species from weathered igneous rocks and from emanations of volcanic/hydrothermal gases and fluids.)

[unquote]

As I said before, much of the CO<sub>2</sub> removed from the atmosphere was turned into things like calcium carbonate and other minerals.

[quote]

"Organic matter in shales is the dominant reduced carbon reservoir. The earth's crust contains  $1.1 \times 10^{21}$  moles of reduced carbon—that is, carbon that has been freed from its oxygen (one mole of an element is equal to  $6.02 \times 10^{23}$  atoms of that substance). The total amount of organic carbon needed to account for all the oxygen in the atmosphere is only  $0.038 \times 10^{21}$  moles! In other words, based on the amount of buried carbon, the atmosphere seems to contain far too little oxygen. Some of that missing oxygen has gone into other materials, 'oxidizing' them in the process. Oxidized reservoirs whose oxygen probably derives from organic matter are sulfate, found in both seawater and evaporite rocks (equivalent to  $0.48 \times 10^{21}$  moles of organics) and in ferric iron (equivalent to  $0.064 \times 10^{21}$  moles).

[unquote]

Just to keep things straight, the O<sub>2</sub> in the air comes from Water, not from CO<sub>2</sub>.

[quote from <http://www.biologie.uni-hamburg.de/b-online/e24/24.htm>]

.....photosynthesis [is] a redox reaction with H<sub>2</sub>X as the electron donator (the oxydizable substance). In the case of green plants is it H<sub>2</sub>O and this means that not the carbon dioxide but the water is broken down.

[unquote]

Thus, the oxygen in the air comes mostly from breakdown of WATER. Of course, that breakdown also produces hydrogen and the plants use CO<sub>2</sub> to get Carbon and make hydrocarbons, but plants can produce oxygen without CO<sub>2</sub>.  
<http://www.biologie.uni-hamburg.de/b-online/e24/24.htm>

> ---Mitchell Jones}\*\*\*

>

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bz

please pardon my infinite ignorance, the set-of-things-I-do-not-know is an infinite set.

bz+sp@xxxxxxxxxxxxxxxxxxxx remove ch100-5 to avoid spam trap

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• ***Follow-Ups:***

- ◆ ***Re: High strength fibers for high pressure tubes.***  
◇ *From:* Mitchell Jones

• ***References:***

- ◆ ***Re: High strength fibers for high pressure tubes.***  
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